

# CONSERVATION STATUS OF THE MASKED BOBWHITE IN SONORA, MEXICO



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**USA.**

**Photo: David G. Solórzano ©**



Of **21** bobwhite subspecies currently recognized  
(Roskov et al. 2016)

**The masked bobwhite** (*Colinus virginianus ridgwayi*)  
is the **only** subspecies included at  
the Convention on International Trade in Endangered  
Species of Flora and Fauna in the **Appendix I**  
category  
(CITES 2008).



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# MEXICAN LEGISLATION

- Classified since **1994** by Mexican law (Norma Oficial Mexicana NOM-ECOL-SEMARNAT-2010) as **endangered** (*en peligro de extinción*).
- *Priority species in the Endangered Species Conservation Program of the Natural Protected Areas Commission (CONABIO 2011).*



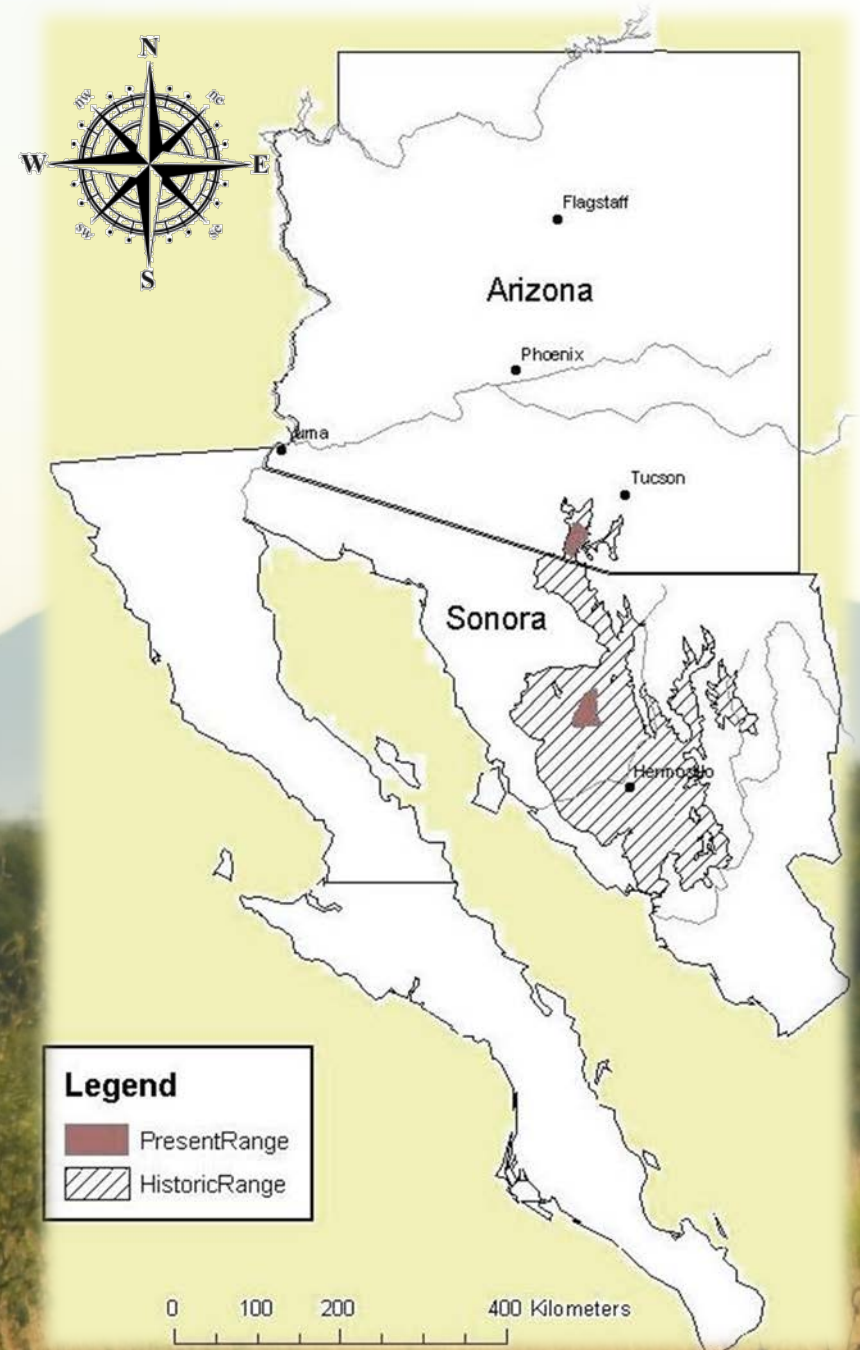
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2015



# Historic distribution:

From areas in the Altar Valley in southern Arizona to Central Sonora, México, near Opodepe, Carbo, Trincheras, Magdalena and Benjamín Hill.

(Garza-Salazar et al. 1992, Del Coro y Ceballos 2000).





# Current distribution

A single wild population in Central Sonora.  
Population estimates include:

- **1,000** individuals during **1968-1972**  
(Tomlinson 1972).
- **1,000–2,000** early in the **21<sup>st</sup> Century**  
(Hernandez et al. 2006).
- **Zero** detected in **2010**  
(Gomez-Limon 2010, Convention on International Trade in Endangered Species of Wild Fauna and Flora. 2011).



Because of the extremely low population estimates,  
**Recovery Actions 3.11 and 3.12** of the  
*U.S. Fish and Wildlife Service Masked Bobwhite  
Recovery Plan* emphasized the need to determine if  
populations occur **outside of the current survey  
areas in Central Sonora**  
(U.S. Fish and Wildlife Service Buenos Aires National  
Wildlife Refuge 2014).



# STUDY AREA

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Included **three ranches** near the town of **Benjamin Hill**, in the state of **Sonora, México**.

- **El Carrizo**
- **San Dario**
- **El Seri**







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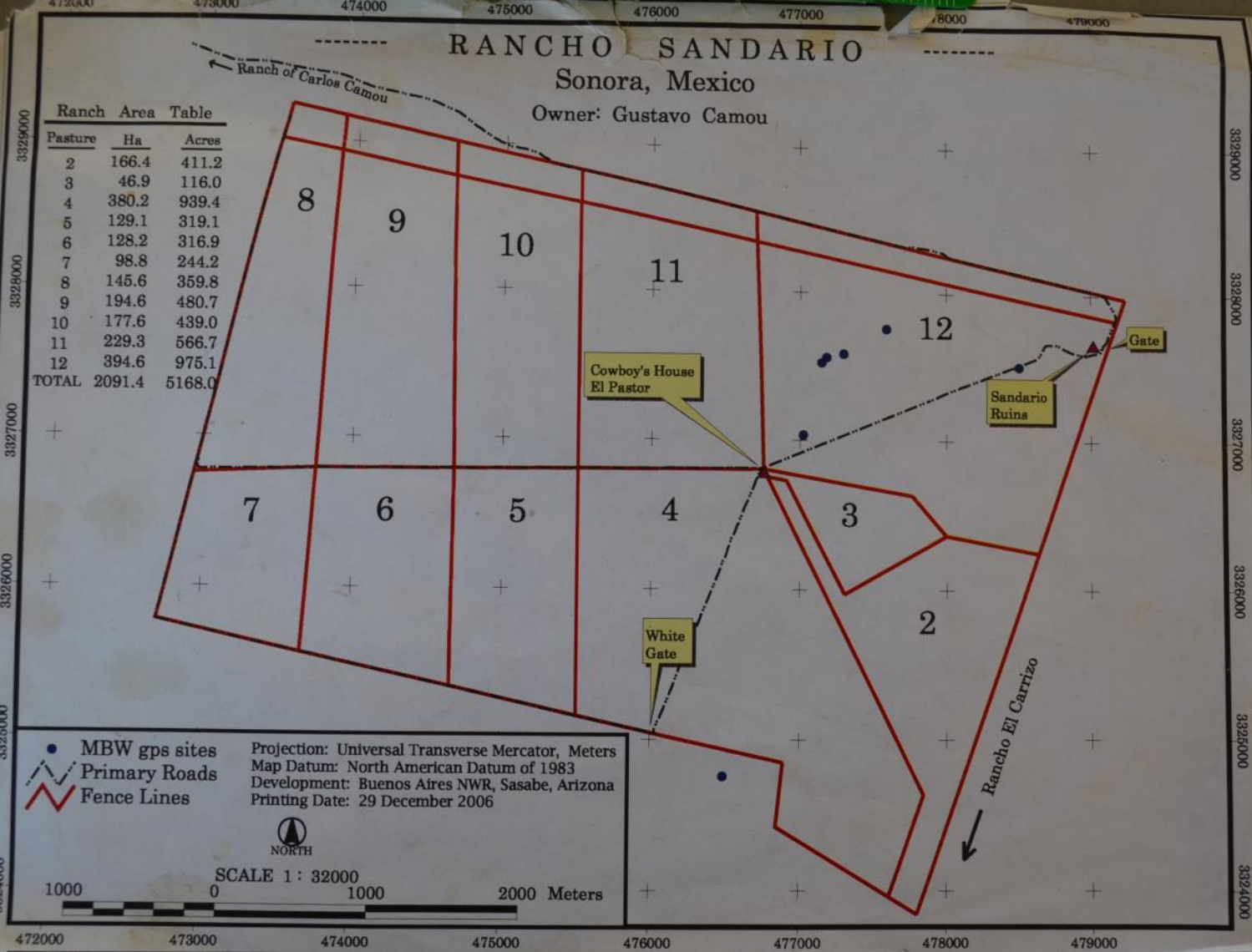


# RANCHO SANDARIO

Sonora, Mexico

Owner: Gustavo Camou

| Ranch Area Table |        |        |
|------------------|--------|--------|
| Pasture          | Ha     | Acres  |
| 2                | 166.4  | 411.2  |
| 3                | 46.9   | 116.0  |
| 4                | 380.2  | 939.4  |
| 5                | 129.1  | 319.1  |
| 6                | 128.2  | 316.9  |
| 7                | 98.8   | 244.2  |
| 8                | 145.6  | 359.8  |
| 9                | 194.6  | 480.7  |
| 10               | 177.6  | 439.0  |
| 11               | 229.3  | 566.7  |
| 12               | 394.6  | 975.1  |
| TOTAL            | 2091.4 | 5168.0 |



- MBW gps sites
- Primary Roads
- Fence Lines

Projection: Universal Transverse Mercator, Meters  
 Map Datum: North American Datum of 1983  
 Development: Buenos Aires NWR, Sasabe, Arizona  
 Printing Date: 29 December 2006



SCALE 1: 32000

1000 0 1000 2000 Meters









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# METHODS

Transects: **July–September, 2013**, and **March–May, 2014**

Interviews of local residents, and further searching

We surveyed in areas where masked bobwhite had historically occurred (e.g., the source of bobwhites translocated to Buenos Aires National Wildlife Refuge in 1999; Hernandez et al. 2006), as well areas where vegetation had been managed for wildlife (Martín-Rivera et al. 2001).





# **RANCHO SAN DARIO**

***Gustavo Camou Luders***



**Reserva Ecológica  
para la  
“Codorniz Mascarita”**

**2  
HS**



**Prohibido Cazar**







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# METHODS

We added another search location on the **San Dario ranch** in **September 2015** based on information from *Alejandro Quijada Sabori*, a ranch worker with 50 years of local experience.

We created a reference point and searched within a 5-km radius.













# METHODS

Transects were randomly selected, with the exception of a path that followed the bed of streams.

According to residents of the ranch they had detections anecdotal and historical (for several years) in sites located in this area.



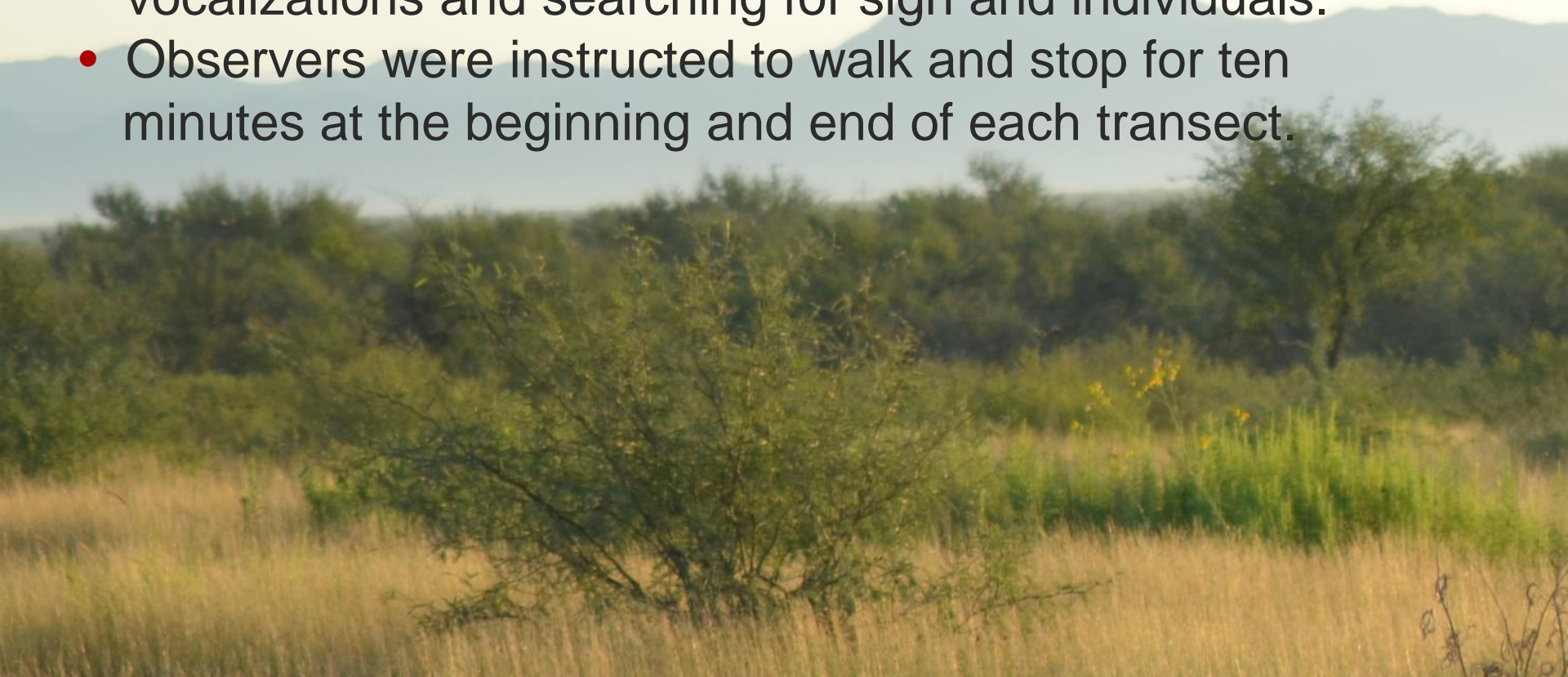


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# METHODS

- Four observer groups, 2-4 individuals each, traversed an average of five transects per day and about 20 transects per week.
- Observers traversed transects, each 1.5 to 2.5 km long, searching an area about 2-3 m wide, listening for vocalizations and searching for sign and individuals.
- Observers were instructed to walk and stop for ten minutes at the beginning and end of each transect.









RANCHO **SAN DARIO**  
*Gustavo Camou Luders*



Reserva Ecológica  
para la  
"Codorniz Mascarita"

2  
HS

 **Prohibido Cazar** 





# METHODS

- We sampled during diurnal periods when breeding masked bobwhite typically vocalize, 0600-0900 hours and 1800-2000 hours.
- We recorded vocalizations and submitted these data to the Macaulay Library of the Cornell Lab of Ornithology.











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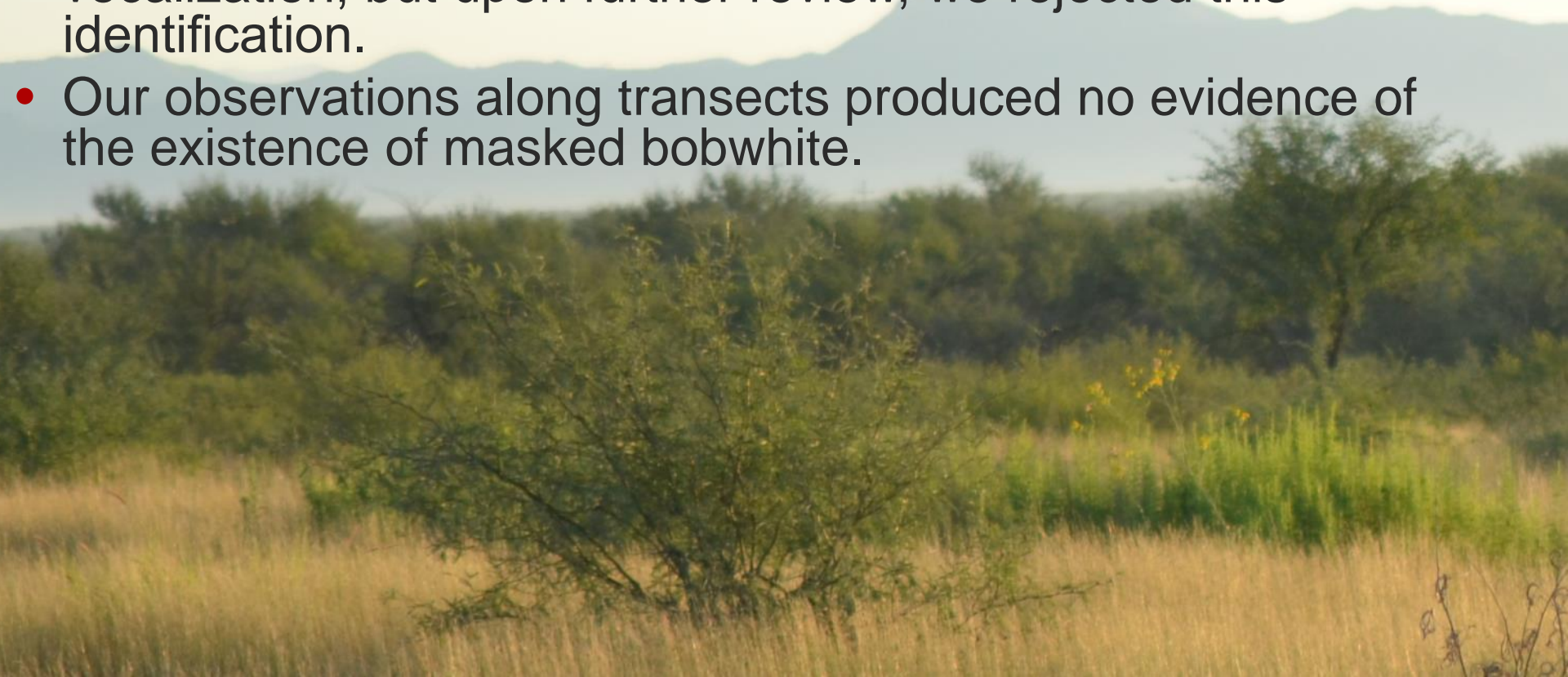


Photo: David G. Solórzano ©

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# RESULTS

- Total transect length was 225 km.
- Observers had a preliminary finding of masked bobwhite eggshell fragments, but did not retain a sample for definitive laboratory identification.
- Observers had a preliminary finding of a masked bobwhite vocalization, but upon further review, we rejected this identification.
- Our observations along transects produced no evidence of the existence of masked bobwhite.





**Photo: David G. Solórzano © 2015.**







[www.scarecrow.eu](http://www.scarecrow.eu)

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# RESULTS

*Anecdotal reports by local residents included:*

- 1) visual observation in **June 2014** of a single male masked bobwhite in a covey of Gambel's quail (*Callipepla gambelii*) adjacent to San Dario ranch by Ing. Marco Antonio Lopez Figueroa.
- 2) a second-hand auditory observation in **August 2015** of a female masked bobwhite on San Dario ranch by Mr. Alejandro Quijada Sabori.





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**Photo: David G. Solórzano**





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# RESULTS

- We recorded a possible vocalization by a masked bobwhite on September 20, 2015, 0913 hour.
- However, an enhanced version of the sound recording (Cornell Macaulay Library) was perceived to be a vocalization by a yellow-breasted chat (*Icteria virens*) by specialists of the Buenos Aires Natural Wildlife Refuge Masked Bobwhite Recovery Team.







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# DISCUSSION

- Our finding of few, if any, masked bobwhite agreed with recent research and the perception of local residents that the subspecies population had declined since 2000.
- Our inability to validate a recording of what was perceived to be vocalization by masked bobwhite points to the need for development of a sonogram for the subspecies.
- We recommend continued searching on the El Carrizo ranch, and the development of coordinated research.





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Conservación de la Vida Silvestre.  
The Mexican Alliance for Wildlife  
Conservation.**



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